



#14/43

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<110> VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOL
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Beschin, Alain

<120> Peptides and nucleic acids derived from Eisenia foetida and the use thereof

<130> 2676-4432US

<140> US 09/596,101

<141> 2000-06-16

<150> PCT/EP98/08169

<151> 1998-12-16

<150> EP 97203974.7

<151> 1997-12-17

<160> 15

<170> PatentIn version 3.1

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-15 -10 -5

gcc ttc acc gac tgg gat caa tat cac atc gtc tgg cag gac gaa ttc 96

Ala Phe Thr Asp Trp Asp Gln Tyr His Ile Val Trp Gln Asp Glu Phe

-1 1 5 10 15

gat tac ttt gat ggc gcg aag tgg caa cat gag gtc aca gca act ggc Asp Tyr Phe Asp Gly Ala Lys Trp Gln His Glu Val Thr Ala Thr Gly 20 25 30	144
gga ggg aac agc gaa ttc caa ctg tac aca cag gat ggg gcc aac agc Gly Gly Asn Ser Glu Phe Gln Leu Tyr Thr Gln Asp Gly Ala Asn Ser 35 40 45	192
ttc gtt cga gat gga aag ctt ttc att aag ccg acg ttg ctg gct gac Phe Val Arg Asp Gly Lys Leu Phe Ile Lys Pro Thr Leu Leu Ala Asp 50 55 60	240
aac atc aac cca cag acg ggt gcg cca ttt gga acc gat ttc atg tac Asn Ile Asn Pro Gln Thr Gly Ala Pro Phe Gly Thr Asp Phe Met Tyr 65 70 75	288
aat gga gtt cta gat gtc tgg gct atg tac ggg gcc tgc acg aat acg Asn Gly Val Leu Asp Val Trp Ala Met Tyr Gly Ala Cys Thr Asn Thr 80 85 90 95	336
gac aac aac gga tgc tac agg acg gga gcc gct ggc gac att cca ccg Asp Asn Asn Gly Cys Tyr Arg Thr Gly Ala Ala Gly Asp Ile Pro Pro 100 105 110	384
gcc atg tcg gca cga gtt cga acc ttc cag aaa tac agc ttc acc cac Ala Met Ser Ala Arg Val Arg Thr Phe Gln Lys Tyr Ser Phe Thr His 115 120 125	432
gga cgc gtt gtc gtt cac gcc aag atg ccc gtc gga gac tgg ctc tgg Gly Arg Val Val Val His Ala Lys Met Pro Val Gly Asp Trp Leu Trp 130 135 140	480
cca gcc att tgg atg ttg ccg gag gat tgg gtc tat ggc gga tgg cct Pro Ala Ile Trp Met Leu Pro Glu Asp Trp Val Tyr Gly Gly Trp Pro 145 150 155	528
cga tcg ggc gag atc gac atc att gaa aca atc ggc aac cga gat ttc Arg Ser Gly Glu Ile Asp Ile Ile Glu Thr Ile Gly Asn Arg Asp Phe 160 165 170 175	576
aag aac act ggt gga gag ttc ctt gga att cag aag atg gga tca acg Lys Asn Thr Gly Gly Glu Phe Leu Gly Ile Gln Lys Met Gly Ser Thr 180 185 190	624
atg cac tgg ggt cca gga tgg gac gac aac cga tac tgg ctg acc agc Met His Trp Gly Pro Gly Trp Asp Asp Asn Arg Tyr Trp Leu Thr Ser 195 200 205	672
ctt ccg aaa cac tca gac gat tgg aac tac ggt gac aac ttc cac acg Leu Pro Lys His Ser Asp Asp Trp Asn Tyr Gly Asp Asn Phe His Thr 210 215 220	720
ttc tgg ttc gac tgg agt ccc aac gga ctg agg ttc ttc gta gac gac Phe Trp Phe Asp Trp Ser Pro Asn Gly Leu Arg Phe Phe Val Asp Asp 225 230 235	768
gag aac cag gct ctg ctc gat gtt cct tat cct ctg att gat gcg aat Glu Asn Gln Ala Leu Leu Asp Val Pro Tyr Pro Leu Ile Asp Ala Asn	816

240	245	250	255	
cca tgg tgg gtg gat ttc tgg gag tgg gga aag ccc tgg ctt cct caa				864
Pro Trp Trp Val Asp Phe Trp Glu Trp Gly Lys Pro Trp Leu Pro Gln	260	265	270	
tac gaa aat gac aat cca tgg gct gga gga acg aac ctg gct ccc ttc				912
Tyr Glu Asn Asp Asn Pro Trp Ala Gly Gly Thr Asn Leu Ala Pro Phe	275	280	285	
gac caa aat ttc cac ttc att ctg aac gtg gct gtc gga gga acg aac				960
Asp Gln Asn Phe His Phe Ile Leu Asn Val Ala Val Gly Gly Thr Asn	290	295	300	
ggc ttc atc ccg gac ggt tgc atc aat cgc ggc gga gac ccg gcc ctg				1008
Gly Phe Ile Pro Asp Gly Cys Ile Asn Arg Gly Gly Asp Pro Ala Leu	305	310	315	
cag aag ccg tgg agc aat ggg gac tgg tac aac gat gca atg agg aaa				1056
Gln Lys Pro Trp Ser Asn Gly Asp Trp Tyr Asn Asp Ala Met Arg Lys	320	325	330	335
ttc ttc gac gcc aga gga aac tgg aag tgg acg tgg gat gac gag gga				1104
Phe Phe Asp Ala Arg Gly Asn Trp Lys Trp Thr Trp Asp Asp Glu Gly	340	345	350	
gac aac aat gcc atg cag gtc gat tac atc cga gtc tac aag cgc aac				1152
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tga				1155

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Asp Tyr Phe Asp Gly Ala Lys Trp Gln His Glu Val Thr Ala Thr Gly	20	25	30
Gly Gly Asn Ser Glu Phe Gln Leu Tyr Thr Gln Asp Gly Ala Asn Ser	35	40	45
Phe Val Arg Asp Gly Lys Leu Phe Ile Lys Pro Thr Leu Leu Ala Asp	50	55	60

Asn Ile Asn Pro Gln Thr Gly Ala Pro Phe Gly Thr Asp Phe Met Tyr
 65 70 75

Asn Gly Val Leu Asp Val Trp Ala Met Tyr Gly Ala Cys Thr Asn Thr
 80 85 90 95

Asp Asn Asn Gly Cys Tyr Arg Thr Gly Ala Ala Gly Asp Ile Pro Pro
 100 105 110

Ala Met Ser Ala Arg Val Arg Thr Phe Gln Lys Tyr Ser Phe Thr His
 115 120 125

Gly Arg Val Val Val His Ala Lys Met Pro Val Gly Asp Trp Leu Trp
 130 135 140

Pro Ala Ile Trp Met Leu Pro Glu Asp Trp Val Tyr Gly Gly Trp Pro
 145 150 155

Arg Ser Gly Glu Ile Asp Ile Ile Glu Thr Ile Gly Asn Arg Asp Phe
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Lys Asn Thr Gly Gly Glu Phe Leu Gly Ile Gln Lys Met Gly Ser Thr
 180 185 190

Met His Trp Gly Pro Gly Trp Asp Asp Asn Arg Tyr Trp Leu Thr Ser
 195 200 205

Leu Pro Lys His Ser Asp Asp Trp Asn Tyr Gly Asp Asn Phe His Thr
 210 215 220

Phe Trp Phe Asp Trp Ser Pro Asn Gly Leu Arg Phe Phe Val Asp Asp
 225 230 235

Glu Asn Gln Ala Leu Leu Asp Val Pro Tyr Pro Leu Ile Asp Ala Asn
 240 245 250 255

Pro Trp Trp Val Asp Phe Trp Glu Trp Gly Lys Pro Trp Leu Pro Gln
 260 265 270

Tyr Glu Asn Asp Asn Pro Trp Ala Gly Gly Thr Asn Leu Ala Pro Phe
 275 280 285

Asp Gln Asn Phe His Phe Ile Leu Asn Val Ala Val Gly Gly Thr Asn
 290 295 300

Gly Phe Ile Pro Asp Gly Cys Ile Asn Arg Gly Gly Asp Pro Ala Leu
 305 310 315

Gln Lys Pro Trp Ser Asn Gly Asp Trp Tyr Asn Asp Ala Met Arg Lys
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Phe Phe Asp Ala Arg Gly Asn Trp Lys Trp Thr Trp Asp Asp Glu Gly
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Val Tyr Lys
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Tyr Trp Leu Thr Ser Leu Pro Lys
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